

The Best Live Rock: From Fiji by Bob Fenner

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Of all the advances in the marine aquarium interest, which do you consider number one in importance? Improved lighting, new and enhanced filtration methods? Captive breeding and rearing of livestock? Treatment, capture, shipping protocols?

For my part, having "lived" the hobby and industry thirty some years, it's actually none of these. Though great strides have been made in keeping saltwater life, much of the credit should go to the popularization of Live Rock (LR).

Hear my thesis. As a boy overseas in the sixties I saw numerous systems in the Philippines and Indonesia that had no modern contrivances whatsoever... actually nothing that requires electricity (think about this). Only natural light and heat. No circulation, only the filtration afforded by healthy LR. Admittedly these systems were vastly understocked and underfed, but they were successful- even, yes, at keeping corals alive.

Skip ahead a few decades and what do we find? Lots of sophisticated (and expensive) gear, controllers, and... Live Rock. Happily, other writers like Mike Paletta, Leng Sy, Eric Borneman and J. Charles Delbeek are giving LR it's due as a pre-eminent mechanism for promoting optimized and stable captive conditions.

LR: Functional & Beautiful

Live rock does a plethora of tasks in and for marine aquariums, necessary and aesthetic. Before listing and detailing these benefits let's briefly describe what LR actually is. A cursory exam of the ornamental aquatics trade reveals there are a few types and a broad spectrum of qualities of LR. Some are decidedly better than others...

Discounting looks alone real live rock is "porous, carbonate-based, non-living matrix (usually made up of coral skeletons), "cured" (more on this later), though supporting, indeed being made up of a healthy (i.e. living) mix of attached and free living life forms. Look over this definition carefully.

Yes, there are "other varieties" of rock offered in the hobby; sedimentary, volcanic, even silicious! These have little application for the vast majority of marine aquariums as you will see. Now onto what LR does for you and your systems.

Water Treatment:

The principal reason cited for utilizing LR for any/all kinds of marine systems are the many ways the living and non-living components modify water quality. A detailing of chemical and physical interactions would fill a large volume. Suffice it to state that cycling of all sorts (e.g. nitrification, denitrification) is augmented.

Food on the Hoof

What better way to assure that something other than each other is available for your livestock to nibble on? Real live rock has a mix of almost all phyla of animals, plants and microbes in/on it... often the sorts of organisms that your fishes and non-fishes eat in the wild. Most foragers spend all their light/waking hours searching such substrates for food.

Habitat

Along with the beneficial effects above, LR provides physical break up of the environment; vital for the mental-emotional wellbeing of your livestock. Caves, crannies and space to hide behind are necessary elements of the environment of wild creatures.

What Type of Live Rock is Best?

"Porous": the degree of nooks and crannies your live rock has is important on several counts. You know from crushing up an Alka Seltzer (tm) that it goes into solution much faster. More surface area equals faster rates of dissolution. For live rock, more surface area results in faster rates of reaction for buffering pH, maintaining alkaline reserve... and so much more.

More porosity allows for more living space for all types of life, macro and micro, including microbes that aid in expedient cycling of wastes.

A further plus is the savings in purchasing more "holey" rock. Per unit weight it occupies more space. Less dense therefore implies less cost per volume.

"Carbonate-based, non-living matrix" (usually made up of coral skeletons): other forms of rock are less suitable for most aquarists/set-ups. The vast majority of marine aquarists intend (consciously or not) that their "decor" positively influence their systems water quality. Those derived from marine deposits and reef mineralization are carbonaceous, and yield a mix of alkaline earth materials of use to captive livestock, particularly mineral-depositing forms like stony corals and clams.

"Cured", though supporting, indeed being made up of a healthy (i.e. living) mix of attached and free living life forms". Rock collected in the wild actually has too much living on it. Too many species and too much life period that can't make the transition of being removed, processed and shipped for days in a dry, dark box. Much of this biota can and should be removed at the source; by selective scraping, pressure-washing (with sea water), and rinsing down over a period of a few days. Other techniques, such as those involving submersion (without other livestock present) and vigorous filtration for a good two weeks are also commended, and all consumers are encouraged to approach live rock as if it were un-cured... and treat it themselves prior to placing it in their main-display systems.

And now that comment on the term "cured" I've alluded to mysteriously above. Over a period of months (usually 8-12) live rock undergoes a type of "reverse succession" or unnatural selection in aquariums, with many fewer species coming to dominate its surface. Sort of like concretes, this process never is "finished", i.e. LR is never "fully cured"... to some extent this is a good/bad thing. You'd like all the bristle worms to grow up, fall out, get eaten, just go away. On the other hand, you will learn that the second "law" of biodiversity rules. Loosely stated, "the more species in a given habitat, the better". For the sake of argument here, accept that we are better off to periodically disrupt the "status

quo" in our aquariums by adding some new live rock (cured to an extent before introduction, of course).

Please don't make the hobby-ending mistake that so many previous marine aquarists have via induced "white-outs" by using "right off the reef mud-rock". There are unscrupulous folks in the trade who simply pick up and immediately ship (before it starts to really stink), "fresh" rock off the reef. These quick-bucks charlatans are not your or the aquarium interests' friends. Buy only cured rock... or (more) fully cure it yourself. 'Nuff said?

Value and the Best Live Rock: An Acknowledgement

So overall, considering what live rock is, it's various functions, and possible treatment before your receiving it, what is it (taken from the title) that makes Fiji LR the best? Stipulated that non-calcareous rock is of no practical use due to it's physical nature, what about the "cultured" LR out of Florida, or the collected rock further to the south in the Atlantic? Such rock is good in that legally it meets the requirements of law, does aid in chemical and physical interaction ameliorating water quality, and precludes the introduction of some noxious pests hailing from the Indo-Pacific.

But due to some miracle of commerce, freight rates are so favorable from Fiji, coupled with an abundance of fabulous high-quality LR material that can be "harvested" by simply picking it up from almost exposed reef flats (thanks, no thanks to every so often cyclones) and to the diligent efforts to one company in particular, the rock hailing from Fiji is superior to all other (present) sources.

And to "sing the praises" of that one company, Walt Smith International is leading the handful of operators in Fiji in their careful collection, processing and shipping of this natural product. I have visited their facilities, drank many a kava with their more than one hundred local employees and seen first hand the value of well-thought out and careful processing of their Live Rock products. For the life of me I can't understand why the trade doesn't insist on similar cleaning, washing and rinse down procedures of all live rock products as the folks do at WSI ... Raw, uncured rock is probably the number one cause of loss of livestock and new marine hobbyists. Once again, if you can't trust that your new live rock has been cured sufficiently, cure it yourself.